Comments of the Natural Resources Defense Council (NRDC) on the *2005 Integrated Energy Policy Report (IEPR)* Staff Report "California and Western Electricity Supply Outlook Report"

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The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer these comments on the California Energy Commission's (CEC) Staff Report "California and Western Electricity Supply Outlook Report" ("Report"), Publication #CEC-700-2005-019-ED2, which was discussed at the workshop held on July 26, 2005. NRDC is a non-profit membership organization with a long-standing interest in minimizing the societal costs of the reliable energy services that Californians demand. We focus on representing our more than 130,000 California members' interest in receiving affordable energy services and reducing the environmental impact of California's electricity consumption.

NRDC commends CEC staff for compiling an overview of electricity supply plans for the state. To improve the usefulness of the Report to the California energy agencies, who are responsible for achieving the Governor's greenhouse gas reduction goals and implementing the state's "loading order" established by the 2003 Energy Action Plan, we offer the following recommendations for future supply outlook reports.

To help ensure state energy policy is followed, the CEC should compile the LSEs' resource plans into a statewide resource plan that specifies resource fuel types.

An electricity supply outlook report should enable the Commission and the public to answer basic questions, such as: If we pursue the path outlined, what will California's fuel mix be in 10 years? Will it be adequately diverse? What will be the overall cost to customers? What risks will customers face? Will the environmental impact associated with the electricity industry increase or decrease? These decisions have significant implications for California's economy and environment and should not be ignored. Without a meaningful analysis of the different resource fuel types that the LSEs may see in their competitive solicitations or may consider building (i.e., natural gas, conventional coal, IGCC, etc.), the LSE's plans provide little meaningful information about the likely future composition of California's electricity system, or the costs, risks and environmental impacts that customers can expect. As this Supply Outlook currently stands, it is unable to fully address these questions.

Several state energy policies guide California's energy future, and it will be important for the state agencies to examine California's projected resource fuel mix to ensure that the goals of these policies are being met. The Governor's aggressive greenhouse gas (GHG) reduction goals make it necessary to look at the impacts of different fossil fuel generation options. In addition,

California's "loading order" specifies that clean fossil-fueled generation is preferred over other alternatives.

With responsibility for providing *statewide* information and policy recommendations, covering all load-serving entities (LSEs) including the publicly-owned utilities (POUs), the CEC is in a unique position to evaluate the state's total resource plan and the total environmental footprint of California's electricity consumption. In future resource data requests, the CEC should collect information on specific fuel type projections from the LSEs. Without fear of violating confidentiality agreements, the CEC should then aggregate the LSEs' projections of resource requirements and their environmental impacts to provide a statewide view of the state's energy future (under the current set of state policies). In order to fully inform energy procurement policy in California, the CEC's resource assessment should yield projections of the fuel types of generating capacity that will be developed and deployed to meet California's electricity needs over the next decade, the total cost of various portfolio scenarios, as well as the associated changes in emissions of GHGs, criteria pollutants and mercury.

In the future, by aggregating the LSE's detailed resource fuel type plans into a statewide summary, the CEC could illuminate the path that the state is headed. This will enable the state (including the CEC and CPUC) to analyze whether additional policies are necessary in order for the state to meet its overall goals and to further guide the LSEs' procurement in the public interest.

The CEC should expand the LSEs' "generic fossil resource" projections into fuel type projections.

The current format of reporting "generic resources" is not useful in determining the full environmental footprint, cost, or risk associated with these resources. Generic fossil resources include natural gas and coal, which have very different environmental impacts, costs and risks. From a climate policy perspective, it is not necessary to identify *individual* plants that would be built or dispatched to serve the California market: what matters is the *aggregate* increase in GHG emissions from coal burning facilities throughout the western region. It is not necessary, either, to report the resource fuel type projections for individual LSEs; using the groupings presented in this Report (IOUs, POUs, and ESPs) is sufficient to determine appropriate potential policy actions.

With today's technologies, coal-fired plants emit GHGs at approximately twice the rate of combined cycle natural gas turbine facilities[1]. Just three new 500 MW conventional coal-fired power plants' annual carbon dioxide (CO_2) emissions would more than offset the total lifetime CO_2 savings from the three major regulated utilities' annual investments in energy efficiency programs. The disparity in emissions of criteria pollutants and mercury is much greater. The impacts of the proposed plants on public health on other states and on visibility (especially in our great western national parks) should not be ignored: it is unlikely that Californians would tolerate such impacts were they to be felt in our own state.

[1] Spath, Pamela L. and Margaret K. Mann, *Life Cycle Assessment of a Natural Gas Combined-Cycle Power Generation System*, National Renewable Energy Laboratory, September 2000, p. 27. Available on-line at http://www.nrel.gov/docs/fy00osti/27715.pdf

As can be seen from the electricity supply assessment for the Western Electricity Coordinating Council (WECC) region in Chapter 3 of the Report, coal figures prominently as a new resource for future electricity supply in the West. The CEC Staff Report "A Preliminary Environmental Profile of California's Imported Electricity" correctly points out that dirty coal-fired power is a "hidden part of California's electricity supply."[2] Twenty-seven new coal-fired power plants (totally just over 15,900 MW) are currently in the planning stages in the Western states, some of which would like to supply California's energy needs. New generation from dirty coal plants is a distinct possibility, as the majority of the planned coal facilities propose to use conventional pulverized coal combustion technology, and only one proposes to use cleaner integrated gasification combined cycle (IGCC) technology. California's energy agencies must pay attention to the imported electricity that may come from these coal resources and ensure the loading order is followed.

Thus, instead of asking the LSEs to provide a single total for "future generic resource needs," we recommend in the future the CEC break this up into resource fuel types (e.g., natural gas and coal) so that California's future resource mix can be clearly seen. The CEC is in the position to roll up the entity-level projections into an estimate of the projected statewide demand for new coal-fired energy and the associated increase in GHG emissions, to then determine whether policy changes are needed to meet California's goals.

Conclusion

Ultimately, the CEC should aim to develop a picture of the projected California resource mix (by specific resource fuel type) over the next decade. Even if modifications cannot be made to this Report at this time since the data request has already been made, analysis of the environmental impact of future scenarios of resource development should be performed. In particular, the estimates of energy production should be translated into emissions of GHGs as well as criteria pollutants and mercury, which will enable the state to look at the projections of the environmental impact associated with the state's energy consumption and ensure compliance with state policy.

If possible, this analysis should be done in time to inform the draft *Integrated Energy Policy Report* (IEPR). At a minimum, the CEC could recommend that the CPUC require that the IOUs perform the analysis we have outlined above in the utilities' long term procurement proceeding submissions. At the very least, this analysis should be included in future editions of the IEPR.

[2] California Energy Commission Staff Report, "A Preliminary Environmental Profile of California's Imported Electricity," Publication #CEC-700-2005-017, p. 2.